

ABSTRACT

An improved system and method is provided for operating a parallel entrainment fluidized bed gasifier system. A first aspect of the present invention relates to a method for reducing ash agglomeration in a parallel entrainment fluidized bed gasifier/combustor system by adding a quantity of MgO to the feedstock used in the gasifier/combustor system. A second aspect of the present invention relates to an apparatus and method for reducing erosion at piping bends in fluidized particulate piping systems which utilizes sand retention cavities positioned to receive and retain a portion of the fluidized particulate. A third aspect of the present invention relates to an apparatus and method for facilitating the flow of sand and char fragments from a first compartment to a second compartment while minimizing the flow of gases between the first and second compartments.

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